Cool Vendors Enable Radical Rethinking After the Reset: A Gartner Trend Insight Report

By Analysts Rita Sallam, Daryl Plummer, Carlie Idoine, Janelle Hill, Adrian Leow

Initiatives: CIO Leadership of Innovation, Disruptive Trends and Emerging Practices

CIOs should consider Cool Vendors that can help them to respond, recover and reinvent in the postpandemic reset. Early adopters should look for offerings that help accelerate their reaction to changing customers' needs and wants, and market realities with new business processes and models.

Overview

Opportunities and Challenges

- Postpandemic recovery requires radical rethinking of strategy, strategic plans, markets, use cases and more. Cool Vendors can expand your opportunities and accelerate reinvention.

- Taking greater risks by turning to small innovative vendors to change the game was once a luxury reserved for early adopters. Today, it will be a matter of survival for many, forcing mainstream buyers and fast follower organizations to reassess their risk tolerance.

- While not all proofs of concept (POCs) leveraging cool new technologies will move into production, well-designed POCs are learning opportunities helping to manage associated risks and advance realization of potential benefits.

What You Need to Know

- Leverage Cool Vendors as an enabling component of your strategy to reconfigure your organization for a significantly different future. Do not just react to the ingenuity of more nimble competitors.

- Prepare your team and your business to understand and mitigate the higher risks inherent in most Cool Vendors' solutions. A Cool Vendor's willingness to prioritize your specific requirements in their product roadmap can offset the higher risk.

- Assess the speed with which your established strategic cloud, application, analytics and infrastructure providers leverage Cool Vendors as innovation drivers in their own products.

Insight From the Experts

The Coolest Cool Vendors Enable Radical Rethinking After the Reset

[Rita Sallam](#), Distinguished VP Analyst and Gartner Fellow

The recent global pandemic has put the entire world in a vulnerable and fragile state. Ingenuity, not just financial muscle, will become a source of advantage, allowing cleverer firms to rapidly reinvent and renew their businesses to succeed in the face of significant challenges and imperatives:

- Accelerating digital as a matter of survival

- Replacing old processes, products, customer needs and wants, and business models with new ones — at an unprecedented pace

- Exploiting data in new ways — many organizations failed to take fact-based action data during the COVID-19 crisis and response, but this will be fundamental to successful renewal

- Managing uncertainty without the benefit of relevant historical data

- Overcoming extreme constraints with extreme creativity and innovation

- Navigating and exploiting disrupted, reorganized and bypassed supply chains

- Enabling the remote worker and customer as well as on-site physical distancing and monitoring

- Responding to dramatic shifts in expectations for a digital society

While the challenges are steep, the opportunities and catalysts for positive change are enormous. Cool Vendors play a significant role in reimagining and rebuilding for sustainability, resilience, responsiveness, and agility to rise to these challenges.

Warm regards,

Rita

Executive Overview

Cool Vendors represent an opportunity to explore technologies earlier in the Gartner Hype Cycle (see ["Understanding Gartner's Hype Cycles"](#)). Many are pioneers in emerging markets, such as those featured on the post-trigger position of the Gartner Hype Cycle.

When considering technologies for an early-stage proof of concept, CIOs and their organizations will assume more risk, but also will find opportunities to create new, differentiating and valuable solutions. Cool Vendors represent a tangible source for building and expanding an innovation competency. Earlier use of technologies and more practical implementations demonstrate the value of innovation to solve today's business problems and rethink not only how value can be created in the future, but also new business models and new ways to build resilience and agility.

Using innovation to respond, recover and renew after the global pandemic has become a more critical priority for most organizations across industries and risk profiles. Taking greater risks by turning to small, innovative vendors to change the game was once a luxury reserved for early adopters. Today, it will be a matter of survival for many, forcing mainstream buyers and fast follower organizations to reassess their risk tolerance.

Gartner's 1H20 Cool Vendor research profiles 171 Cool Vendors in 43 reports. This overview highlights representative Cool Vendors — those that represent a category or class of value for buyers. These Cool Vendors offer unprecedented opportunities to exploit new business models to truly transform business, compress cycles of insight and to take actions to get to business outcomes. Technologies such as artificial intelligence/machine learning (AI/ML), computer vision, augmented reality, various types of sensors, blockchain, cloud and new data sources and combinations continue to provide a solid base of coolness.

Most organizations will go through the stages identified in Figure 1 as a result of the global pandemic, on the path to what will be a significant reset in all aspects of business, government and society. Cool Vendors can play a significant role in enabling an organization's response, recovery and renewal to the current crisis and to other disruptions that organizations will inevitably face in the future.

Readers should review the referenced reports for more providers to consider.

Definition

Gartner's definition of a Cool Vendor is a small company offering a technology or service that is innovative, impactful or intriguing.

The three elements of a Cool Vendor are further explained below:

- **Innovative** — Enables users to do things they could not do before.

- **Impactful** — Has or will have a business impact, not just technology for its own sake.

- **Intriguing** — Has caught Gartner's interest during the past six months.

A more detailed explanation of the Cool Vendor selection criteria is available in Note 1.

<p style="text-align:center;color:#d4541c;font-weight:bold;">Figure 1. Enabling Radical Rethinking Is Key To Coolness</p>

Enabling Radical Rethinking Is Key To Coolness
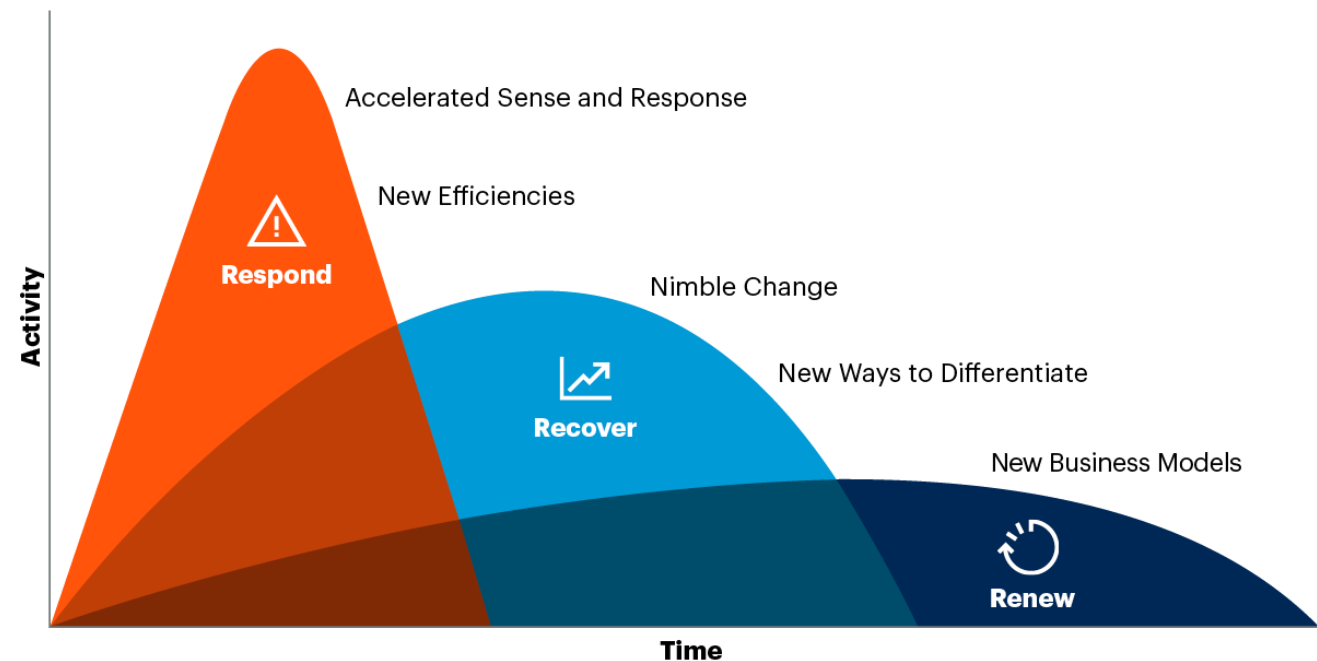
Source: Gartner
725739_C

In this Trend Insight report, we will explore the following:

- How are cool vendors leveraging combinations of advanced technologies and unique data to create "1 + 1 = 3" value?

- How are cool vendors enabling organizations to respond to disruption to reinvent and renew after the reset to capitalize on new opportunities?

- How are cool vendors augmenting experiences in new and positive ways?

Research Highlights

How Are Cool Vendors Leveraging Combinations of Advanced Technologies and Unique Data to Create "1 + 1 = 3" Value?

For most industries, business as usual has become irrelevant. Continuous adaptation and reinvention of processes, customer experiences, digital products and business models have become the new business survival imperative. Many Cool Vendors are leveraging unique dataset combinations with new AI techniques to reimagine established processes and business models to

provide intelligence, automation and augmentation of the human workforce. Many of these vendors will enable resources to be automatically reconfigured and redeployed to maximize opportunities and enhance the higher-level human decision making needed to navigate to success on the other side.

Cool Vendors using new combinations of data and AI are transforming everything, from autonomous vehicles to insurance underwriting and home healthcare:

- The development of autonomous vehicles provides a great example of the need to combine multiple technologies (such as software-based vehicle perception systems, lidar, radar, 3D imaging and HD maps) through tight partnerships and ecosystems. There is no off-the-shelf solution that contains all of the technical and operational aspects for an autonomous vehicle. DeepMap has overcome an industry bottleneck with the traditional approach to developing maps which is scalability. It takes a long time to build an extensive map of a country or region, which then needs to be continually surveyed to maintain accuracy. DeepMap provides a service that allows customers to generate and maintain their own high-definition maps for autonomous vehicles using crowdsourcing (such a service likely has applicability to a variety of industries beyond autonomous vehicles such as travel and dining).

- In insurance, AI-powered scenario planning with new combinations of data is making it possible to profitably underwrite new risk classes (such as cyber), which lack historical claims data to inform risk pricing, selection and exposure modeling. Many existing AI and ML models based on historical data may no longer be valid in a post-COVID-19 world. CyberCube combines curated data from multiple sources with scenario modeling to reduce uncertainty, inform underwriting appetite and size the opportunity in different segments.

- In healthcare, new data combinations from remote sensors along with AI are transforming in home care. Healthcare delivery organizations are using AI and machine learning combined with new sources of data to respond to accelerating industry disruption and cost containment pressure. For example, Cuviva's virtual care solution monitors the most critical and frail elderly patients in their own home using sensors and AI and machine learning and alerts to changes and predicted changes in patient metrics.

- AI is now being used across the whole value chain of mobility, from vehicle development to fleet servicing, enabling improvements in cost and quality. For example, UVeye uses AI in conjunction with image recognition to enable precise visual inspection of several areas of the car in seconds to optimize the vehicle inspection process.

- AI is also driving continuous intelligence across organizational processes, transforming those processes along the way. For example, Algo's virtual analyst combines data science, robotic process automation (RPA) and natural language processing (NLP) to monitor, analyze and execute business processes in reaction to changing patterns in operational data — saving human analysts' valuable time and effort.

Recommendations

- Explore ways for customers to either save money or generate new revenue streams by innovating on the new business use cases that autonomous systems could enable.

- Explore how AI can constantly read signals, react to events, and proactively anticipate what will happen and enable new levels of agility and rapid reconfiguration in a postpandemic world.

- Look for Cool Vendors that are leveraging new combinations of data and AI technologies to fundamentally change processes and business models, understand customers, and create new customer experiences while generating cost savings through operational efficiencies.

- Enable augmented consumers by investing more in context-aware capabilities to bring relevant insights when and where needed.

Related Research

- "Cool Vendors in Autonomous Vehicle Systems" — Developing a solution that integrates into an autonomous vehicle system is complex and challenging. Technology and service providers must prepare to face the technology threats posed by direct competitors, be ready to partner, while also being ready to harness innovative new business approaches.

- "Cool Vendors in Analytics and Data Science" — Organizations that lack the foundation required to enable more people to connect with siloed data will fail to achieve the potential of augmented analytics. To harness the power of augmented analytics, data and analytics leaders must facilitate analytics collaboration with an innovative semantic layer.

- "Cool Vendors in Healthcare Technology" — Healthcare delivery organizations (HDOs) are looking to control cost and respond to industry disruption. The profiled emerging technology and service providers help HDOs make data-driven decisions by leveraging chronic condition management, social determinants of health, virtual care and genetic screening.

- "Cool Vendors in Risk Modeling and Loss Prevention for Insurance" — Technology and service providers (TSPs) increasingly use data to provide property and casualty insurers with innovative solutions in areas such as risk modeling and loss prevention. TSPs can gain insights on how to succeed as they go to market in the insurance vertical from these Cool Vendor examples.

- "Cool Vendors in AI in Automotive and Smart Mobility" — The mobility sector is filled with startups pushing the boundaries of AI into areas, such as vehicle development, servicing, and in-vehicle user experience. CIOs in automotive and smart mobility should look to partner with them.

How Are Cool Vendors Enabling Organizations to Respond to Disruption and Reinvent After the Reset to Capitalize on New Opportunities?

Organizations that have institutionalized resilience and agility are better prepared to respond to disruption and reinvent themselves to capitalize on new opportunities. Cool Vendors that accelerate migration to and adoption of cloud-native architectures provide organizations with elasticity, scalability, security, and resiliency for digital and change acceleration. Some Cool Vendors also improve agility by offering solutions that enable cohesion and interoperability across formerly distinct and separated processes/tools. In the current environment of extreme shifts, the large amounts of historical training data that many AI and ML models rely on may no longer be relevant. Cool Vendors that leverage new combinations of smaller data with techniques such as reinforcement, distributed learning, agent-based systems and scenario planning along with synthetic data development approaches to overcome these challenges will be attractive. Other Cool Vendors enabling the deployment of AI models on edge devices either via new software solutions or AI-specific chips support greater scale and business impact.

Disruption in retail has been continuous and has come from all angles, including fierce competition, emerging technologies, and now, a global health pandemic and the economic impacts of it. Prior to COVID-19, many retailers had lost sight of the basic expectations of customers while they focused on digital transformation efforts, often distracted by emerging, "shinier" technologies. However, customer requirements for the right assortment, product availability, ease of finding products, efficient order fulfillment, and simplified returns are foundational. A retailer that fails to execute these basic activities correctly risks losing the transaction and ultimately the customer. COVID-19 has served as a catalyst with many Cool Vendors as enablers to accelerate the convergence of digital and physical touchpoints.

Examples of profiled companies in this wave provide the following opportunities:

- As the physical store remains the greatest contributor to a retailer's sales and revenue for most segments, enabling customer convenience for searching and locating products needs to be as easy as it is when shopping online. For example, SIRL uses a combination of Bluetooth low energy (BLE) satellites nodes, its cloud-based software and a customer's mobile phone to determine a customer's microspatial location in the physical store to provide personalized and efficient in-store navigation directly to the products the customer is trying to locate.

- An inability to drive adoption and culture change remains one of the major factors hamstringing the expected productivity gains of a digital workplace. Productiv aims to quantify SaaS adoption, usage and value using visual benchmarking of applications, automated license (de-)provisioning workflows and user engagement analytics.

- Thingification — the act of adding sensation, computation and communication to inert things — is central to the development of the Internet of Things (IoT). Deploying AI to edge devices requires sufficient embedded compute capabilities to handle the complex processing tasks that these techniques require. eta harnesses subthreshold neuromorphic processing to execute AI analysis with minimal power consumption. This increases the intelligence, and thus the utility, of the newly-connected thing.

- Cloud-native architecture provides organizations with unparalleled elasticity, scalability, security and resiliency. These advantages enable DevOps and infrastructure and operations (I&O) teams to rapidly deliver scalable solutions that meet the demands of digital business. Diffblue uses AI to automatically write and maintain comprehensive suites of unit tests for rapidly evolving Java code libraries, freeing DevOps teams from manually writing unit test code.

- Obtaining quality training data for AI tasks is cumbersome and, at times, not even an option because the data is sparse, partial, incomplete, difficult to collect or unavailable for a specific business problem. This is particularly true for many models based on large amounts of historical data that may no longer be valid as a result of the global COVID-19 pandemic. GEMINAI by Diveplane allows its users to produce synthetic data, with the same statistical properties as the original data, yet without the confidential and potentially sensitive data elements.

- The design constraints of many edge and endpoint systems preclude the use of chips designed for data center deployments. This creates an opportunity for semiconductor vendors and startups to develop a range of new low-power, small form factor devices optimized to run deep neural network (DNN)-based applications. Hailo's eponymous Hailo-8 chip is designed to enable an efficient implementation of AI functionality within endpoint devices. They provide a software development kit (SDK) that takes a trained neural network model as input to create a custom chip mapping.

Recommendations

- Create sustained adoption of personal and team productivity applications by employing a flexible combination of training, incentives and analytics across multiple adoption paths.

- Connect stores and online shopping so customers and associates can navigate efficiently and find products easily.

- Move artificial intelligence models to the network edge by harnessing in-situ AI analysis hardware.

- Solve difficult business problems by mixing and integrating multiple AI techniques throughout your enterprise architecture.

- Improve software quality and remove constraints to agility by incorporating easy-to-adopt AI-enabled test automation tools that leverage natural language processing (NLP) and machine learning (ML).

- Utilize new technologies such as synthetic data generation to mitigate privacy concerns and unlock opportunities in AI projects where data is limited or incomplete, or where enrichment is required.

Related Research

- **"Cool Vendors in the Digital Workplace"** — Employee enablement is critical to the success of digital workplace initiatives but it is rarely programmatically managed and governed. We profile four emerging vendors in this report who promise to optimize the enablement of digital workplace applications.

- **"Cool Vendors in Retail: Meeting Customer Basic Expectations Is More Important Than Ever"** — An exceptional retail experience begins with consistently meeting the basic expectations of customers. Retail CIOs should consider these Cool Vendors which enable retailers to offer the best assortments, product availability, optimized labor, and efficiencies for fulfilling or returning an order.

- **"Cool Vendors in IoT Thingification"** — Greater edge intelligence is creating new opportunities in the IoT, but supporting that additional processing requires new techniques and technologies. This report highlights four vendors delivering innovative products that can enable, or demonstrate the utility of, this new generation of more-intelligent Things.

- **"Cool Vendors in Agile and DevOps"** — Cloud-native technologies, AI-enabled test automation and programmable infrastructure transform the way organizations develop and deploy applications. I&O leaders working with application leaders in DevOps teams must consider four cool vendors that simplify the adoption of these technologies.

- **"Cool Vendors in AI Core Technologies"** — AI core technologies are now more focused to help organizations scale their initiatives. Data and analytics leaders can consider these Cool Vendors to address priorities around synthetic data generation, operationalizing and scaling AI projects, explainability and working with tough use cases.

- **"Cool Vendors in AI Semiconductors"** — The deployment of products with AI capabilities continues to gain momentum but requires increasingly sophisticated semiconductor devices to enable this new generation of smart things. This report highlights four semiconductor vendors delivering innovative AI-enabled chips to facilitate this trend.

How Are Cool Vendors Augmenting Experiences in New and Positive Ways?

Engaging customers through digital channels is an imperative for most B2B and B2C organizations. From our "Survey Analysis: Digital Maturity in Customer Service, Investments and Impacts," it is clear that organizations with more mature digital engagement strategies were able to improve customer experience metrics, improve first-contact resolution and reduce call volume. As organizations begin to respond to the challenges of meeting customer service needs during the current global pandemic, there are opportunities for greater use of digital and self-service capabilities (see "Deliver Customer Service During COVID-19: Improve Digital and Self-Service Capabilities").

One of the most interesting innovations in customer experience comes from the world of augmented reality (AR) in the development of the AR cloud. This innovation provides a persistent, digital content layer mapped to objects and locations in the physical world. Once it becomes more developed, it will enable a digital twin of the physical world that can be augmented with information and virtual objects. Cool Vendors in this wave support new employee, patient and customer experiences. They also redefine business models:

- The AR cloud will enable new interactions and ways to monetize the physical world requiring organizations to change their thinking around physical assets, customer interaction and associated risks. For example, Ubiquity6 provides a computer vision-based platform that anchors digital objects to the physical world by bringing intelligence to smartphone cameras. On-site visual inspection by an insurance adjuster is open to human error, is time-consuming and resource intensive. Bdeo has created a visual intelligence solution that uses AI and a dataset of more than 30 million third-party images from six different countries to change the way customers connect with their auto insurer for real-time underwriting and claims adjudication.

- The reliable and timely sharing of patient event, care transition, and medical record referral information with community healthcare providers is a persistent healthcare provider and industry challenge. The careMESH provider directory includes all U.S. providers and the necessary information to facilitate communication with community providers and practices, which reduces the need to purchase third-party provider directories and manage the daily directory updates. It also automates referral management.

- Organizations are challenged to achieve greater operational efficiencies by engaging and retaining valuable talent to stay ahead of the competition. How we work, what work we do and how we secure employment are being transformed by AI, social collaboration technology and interactive media, including self-curated video content. For example, Legion offers a data-science-driven workforce management (WFM) platform that uses AI to more accurately map and match labor supply and demand.

- As digital commerce continues to grow its share of sales globally, application leaders need to continuously improve their solution's ease of use and overall customer experience in order to retain and grow their customer base. For example, Neocles has a business user-friendly customer experience (CX) that brings the B2C experience to B2B commerce.

- Personalizing digital customer experiences is a key objective of great customer service, particularly as interactions increase as a result of digitalization. whenwhyhow uses machine learning on a combination of internal data sources (such as customer information and actions, channel usage, past conversations) and external data sources (such as economic data, weather, competitor profiling) to determine the most optimal way to engage customers in digital channels at a personal level.

Recommendations

- Identify immersive workspace vendors and technologies for collaboration by reviewing marketing imagery, 3D models for products, or virtual brainstorming to begin exploring immediate and long-term opportunities for achieving business outcomes through augmenting human experiences.

- Assess the maturity of vendors using artificial intelligence by reviewing their offerings against the four dimensions of artificial intelligence maturity: technical advances, organizational maturity, market readiness and solution maturity.

- Enable seamless partner communications and data exchange among traditional providers and community healthcare providers by integrating directories and shared workflows with electronic health records (EHRs).

- Extend collaboration and meaningful work interactions by supplementing traditional employee engagement survey methods with artificial intelligence (AI)-enabled digital tools.

- Provide B2B customers with the same caliber of experience as B2C customers by utilizing tools that deliver modern and relevant experiences.

- Take stock of existing technologies used to support the four pillars of great customer service. Identify gaps and see how Cool Vendor technology could be used to pilot and deliver differentiated experiences.

Related Research

- "Cool Vendors in Augmenting Human Experiences" — Human augmentation and immersive experiences are facilitating digital transformation through human transformation. CIOs and technology innovation leaders should consider these cool vendors to help their organizations link these human experiences to clear business outcomes.

- "Cool Vendors in Insurance" — Business ecosystems can help insurance companies deliver net new digital products and services. Life and property and casualty (P&C) insurance CIOs can leverage innovations from the vendors profiled in this report to accelerate their ecosystem participation.

- "Cool Vendors in Healthcare Interoperability" — Data is the lifeblood of the healthcare industry, and the emerging FHIR standard promises streamlined data exchange among ecosystem partners — yet interoperability at scale remains elusive. These Cool Vendors offer CIOs innovative approaches and accelerators to achieve interoperability goals.

- "Cool Vendors in Human Capital Management: Modernizing the Workplace With AI and Video" — Artificial intelligence, self-curated video and digital collaboration tools are modernizing the

workplace. Application leaders transforming human capital management must promote the adoption of these tools in order to improve productivity and organizational performance.

- "Cool Vendors in Digital Commerce" — Digital commerce initiatives are accelerating, especially given the impact of the pandemic and the need to ensure continuity of operations. B2C and B2B channels are also increasing. Application leaders should continually evaluate emerging vendors that offer innovative ways to manage and optimize customer experiences across channels.

- "Cool Vendors in CRM Customer Service and Support" — This year's Cool Vendors in CRM customer service and support technology offer innovative approaches to addressing technology needs of great customer service. IT leaders responsible for customer service applications should review how these vendors could support differentiated service and lower costs especially in a digital-first environment.

Related Resources

Webinars

Panel Discussion: Use AI to Fight Through COVID-19 and to Recover

Execute Digital Workplace Strategies in a Post-Pandemic World

The Gartner Top 10 Strategic Technology Trends for 2020

Data Science and Machine Learning Trends You Can't Ignore

Other Resources

Technology GMs: Adjust Your Product Strategies and Vision for COVID-19

Understand 3 Key Types of Machine Learning

AI Shows Value and Gains Traction in HR

Note 1: Understand the Cool Vendor Selection Criteria

- The vendor should be less than 10 years old.

- The vendor must not be featured in a Vendor Rating or in a Magic Quadrant.

- The vendor must not be previously featured in a Cool Vendor report.

- The vendor must be an independent business, a discrete subsidiary (i.e., tracks or reports revenue separately) or spinoff of another vendor. In this way, subsidiaries of major vendors may be considered unless they are majority-owned entities.

- The vendor's annual revenue must be less than $100 million.

- The Cool Vendor product needs to be available at point of submission for inclusion in a Cool Vendor report.

- The vendor must be considered innovative or transformative for IT products, services or initiatives. A Cool Vendor is not just about technology; it may also include services.

Previously profiled Cool Vendors can be profiled again only in the retrospective "Where Are They Now?" section of a Cool Vendor report.

Document Revision History

Cool Vendors — Action, Not Just Reaction, Is Key to Coolness: A Gartner Trend Insight Report - 30 May 2019

Recommended by the Authors

Inventing the Future With Continuous Foresight

Toolkit: How to Build an Emerging Technology Radar

Cool Vendors in Advertising

Cool Vendors in AI for Banking and Investment Services

Cool Vendors in AI for Retail

Cool Vendors in API Strategy

Cool Vendors in Blockchain Business

Cool Vendors in Blockchain Technology

Cool Vendors in Cloud Office Security

Cool Vendors in Communications Service Provider Network Operations

Cool Vendors in CRM Sales Technologies

Cool Vendors in Cyber-Physical Systems Security

Cool Vendors in Data Management

Cool Vendors in Enterprise Networking

Cool Vendors in Identity and Access Management and Fraud Detection

Cool Vendors in Integrated Risk Management

Cool Vendors in Life Sciences

Cool Vendors in Location Services and Applications

Cool Vendors in Manufacturing Industry Solutions

Cool Vendors in Multichannel Marketing

Cool Vendors in Natural Language Technology

Cool Vendors in Networking Semiconductors

Cool Vendors in Performance Analysis for Cloud-Native Architectures

Cool Vendors in Privacy, 2020

Cool Vendors in Security Operations and Threat Intelligence

Cool Vendors in Supply Chain

Cool Vendors in Technology Innovation Through Power and Energy Electronics

Recommended For You

Cool Vendors: The Best Cool Vendors Change the Competitive Landscape — A Gartner Trend Insight Report

2019 Hype Cycles: 5 Priorities Shape the Further Evolution of Digital Innovation: A Gartner Trend Insight Report

Predicts 2020: Barriers Fall as Technology Adoption Grows — A Gartner Trend Insight Report

The Art of the Innovation Workshop

Navigate the 9 Common Pitfalls to Scaling Innovation

About Gartner   Careers   Newsroom   Policies   Privacy Policy   Contact Us   Site Index   Help   Get the App

Gartner, Inc. | 725739